KANSAS

DEPARTMENT OF HEALTH
AND ENVIRONMENT
Division of Environment

Kathleen Sebelius, Governor
Roderick L. Bremby, Secretary

www.kdheks.gov

April 11, 2008

Source ID No. 1810023

Mr. Doug Sedersrom
Chief Financial Officer
Goodland Energy Resources, L.L.C.
1206 Main Street
Goodland, Kansas 67735

SUBJECT: Revised Air Emission Source Construction Permit

Dear Mr. Sederstrom:

The Kansas Department of Health and Environment (KDHE) has reviewed Goodland Energy Resources proposed modifications to the proposed coal fired generating unit located near Goodland, Kansas. Enclosed is the Revised Air Emission Source Construction Permit for the project.

Please read the permit carefully because it obligates Goodland Energy Resources to certain requirements.

Due to the concerns expressed during the public comment period, KDHE is requiring the following:

1. A Material Separation Plan shall be completed prior to operation of Goodland Energy Resources facility. It shall be implemented when the facility is in operation to minimize hazardous air pollutant emissions. The plan shall:

    - Describe the proposed conditions of separation, processing and proper disposal of unacceptable material (material which has the potential to cause hazardous air pollutants to be emitted at the GER boiler facility). These items need to be separated and disposed of in accordance with Kansas Solid Waste regulations. Please contact Mr. Dennis Degner, Bureau of Waste Management at 785-296-1601 for the solid waste requirements.

- Include a list of the municipal solid wastes to be separated to minimize the hazardous air pollutants which may include but are not limited to: batteries, such as dry cell batteries, mercury batteries and vehicle batteries; fluorescent lights; refrigerators; stoves; freezers; washers; dryers; bedsprings; vehicle frame parts; crankcases; transmissions; engines; lawn mowers; snow blowers; bicycles; file cabinets; air conditioners; hot water heaters; water storage tanks; water softeners; furnaces; oil storage tanks; metal furniture; propane tanks.

- Be kept at the site and updated as necessary.

2. Goodland Energy Resources shall obtain all necessary permits and approvals for storing and processing municipal solid waste on site in accordance with the Kansas Solid Waste Regulations. Please contact Mr. Dennis Degner, Bureau of Waste Management at 785-296-1601 for the solid waste requirements.

In October 2007 KDHE began addressing green house gas (GHG) emissions in Kansas to protect the health and environment of Kansans. To accomplish this task, KDHE will engage industries and stakeholders to establish goals for reducing GHG emissions and strategies to achieve them. Therefore, in accordance with K.S.A. 65-3005(j), KDHE is seeking your cooperation to voluntarily implement strategies, including the development and use of innovative technologies, market-based principles and other private initiatives to reduce or prevent GHG emissions.

As provided for in K.S.A. 65-3008b(e), an owner or operator may request a hearing within 15 days after affirmations, modification or reversal of a permit decision pursuant to subsection (b) of K.S.A. 65-3008a. In the Request for Hearing, the owner or operator shall specify the provision of this act or rule and regulation allegedly violated, the facts constituting the alleged violation and secretary's intended action. Such request must be submitted to: Director, Office of Administrative Hearings, 1020 S. Kansas Avenue, Topeka, Kansas 66612-1327. Failure to submit a timely request shall result in a waiver of the right to hearing.

Please notify the District Air Quality Representative, Richard Robinson, at the North West District Office in Hays at (785) 625-5663 when construction is complete and the expansion project is in operation so that an evaluation can be conducted. Include source ID number 1810023 in all communications with the KDHE regarding this facility.

If you have any questions regarding this permit, please contact me at (785) 296-1578.

Sincerely,

Dana S. Morris

Dana S. Morris
Professional Environmental Engineer
Air Permitting Section

DSM:saw
Enclosure
c: Richard Robinson, NWDO Air Program Representative
C-7613

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REVISED
AIR EMISSION SOURCE
CONSTRUCTION PERMIT
AND
CLASS II OPERATING PERMIT

Source ID No.:	1810023
Effective Date:	April 11, 2008
Source Name:	Goodland Energy Resources, LLC
NAICS:	221112, Fossil fuel power generation (SIC 4911)
Site Location:	Section 20, Township 8 South, Range 40 West Sherman County, Kansas
Site Owner/Operator Name:	Goodland Energy Resources, LLC
Site Owners/Operators Mailing Address:	1202 Main Goodland, KS 67735
Contact Person:	Mr. Doug Sederstrom Chief Financial Officer Telephone Number (785)890-9463

This permit is issued pursuant to K.S.A. 65-3008 as amended.

DIVISION OF ENVIRONMENT
Bureau of Air & Radiation
Air Permitting Section
CURTIS STATE OFFICE BUILDING, 1000 SW JACKSON ST., STE. 310, TOPEKA, KS 66612-1366
Voice 785-296-1570 Fax 785-291-3953

Source Covered by this Document

Goodland Energy Resources, LLC (GER) is proposing to install and operate a 22-megawatt coal-fired generating unit with associated coal, lime, and ash handling equipment at a site located in the northwest corner of Section 20, Township 8 South, Range 40 West, in Sherman County, Kansas.

The coal-fired boiler will be subject to the requirements of 40 CFR Part 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units for which Construction Commenced after June 19, 1984.

A construction permit and class II operating permit was issued for this facility on March 9, 2006. On July 18, 2007 the Kansas Department of Health and Environment (KDHE) received an application from the facility proposing an alternative control system for nitrogen oxides (NOx) from the boiler. Information concerning the use of additional fuels for the boiler was received on November 30, 2007.

Need for Construction Permit

Emissions of oxides of nitrogen (NOx), carbon monoxide (CO), sulfur dioxide (SO_2), volatile organic compounds (VOC), particulate matter (PM), particulate matter less than 10 microns in diameter (PM_{10}), and lead were evaluated for this permit review. This project is subject to the provision of K.A.R. 28-19-300 (Construction permits and approvals; applicability) because the potential-to-emit of NOx, SO_2, VOC, PM, and PM_{10} exceeds 40, 40, 40, 25, and 15 tons per year, respectively.

An air dispersion modeling impact analysis was conducted by KDHE as a part of the construction permit application process.

Purpose of the Class II Operating Permit

The purpose of this class II operating permit is to limit the facility's actual emissions to less than major source thresholds.

Significant Applicable Air Pollution Control Regulations

The main boiler, the coal handling equipment, and the lime storage/handling system, as proposed, are subject to Kansas Administrative Regulations relating to air pollution control. The following significant Kansas air quality regulations were determined to be applicable to this source:

K.A.R. 28-19-11 Exceptions Due to Breakdown or Scheduled Maintenance

K.A.R. 28-19-31 Emissions Limitations

K.A.R. 28-19-650 Opacity Requirements

K.A.R. 28-19-300 Construction permits and approvals; applicability

K.A.R. 28-19-720 New Source Performance Standards

Air Emission Unit Technical Specifications

The following equipment or equivalent is approved:

1. One solid fuel-fired steam generator, a Riley Stoker waterwall spreader stoker. The fuel for the boiler will be bituminous or sub-bituminous coal, agricultural byproducts (including sunflower seed hulls), tire derived fuel (TDF), municipal solid waste (MSW), and wood and wood waste. The maximum heat rating of the boiler will be 342 Million BTU/hr and a 22 MW steam turbine will be installed to generate electricity utilizing steam produced in the boiler. The boiler is to be equipped with a selective non-catalytic reduction system (SNCR) and over fire air (OFA) to control NOx emissions, dry flue gas desulfurization (dry FGD) to control SO_2 emissions, and a fabric-filter system to control particulate emissions. Provisions are to be made to accommodate the installation of an in-duct catalyst or an oxidation system for additional NOx reductions if the SNCR/OFA controls are not sufficient.

2. One truck and railcar coal unloading system designed to handle 500 tons per hour. A fabric filter will be used to control fugitive emissions from the unloading area.

3. One powdered lime storage silo, which will be filled with pneumatic conveying and will be equipped with a bin vent filter.

4. One ash and scrubber residue storage silo, which will be filled with pneumatic conveying and will be equipped with a bin vent filter.

5. One enclosed transfer and conveying system equipped with dust suppression to convey coal from the unloading station to the coal storage area.

6. One enclosed transfer and conveying system equipped with dust suppression to convey coal from the coal storage area to the boiler house.

Air Emissions Estimates from the Proposed Activity

Pollutant Type	Post Permit Potential-To-Emit (Tons per Year)[1]
Nitrogen Oxides (NOx)	<100
Carbon Monoxide (CO)	<100
Sulfur Dioxide (SO_2)	<100
Volatile Organic Compounds (VOC)	4.1
Particulate Matter (PM_{10})	79.5
Individual HAP	<10

Air Emission Limitations

1. K.A.R. 28-19-650(a)(3): Opacity of visible emissions at the outlet of any installed control device shall not exceed 20 percent.

2. Main Boiler:

   On and after the required performance tests referenced in 40 CFR Part 60 and K.A.R. 28-19-212, the emissions of each pollutant that is expressed as lbs/mmBtu shall not exceed the limit referenced hereunder. Test requirements and compliance with this standard is described in the section entitled Compliance and other Performance Testing.

   a. The operator of the source shall not emit or cause to be emitted any NOx emissions exceeding 0.6 pounds per million BTU heat input (lb/MMBtu) on a 30-day rolling average. (40 CFR 60.44b(a))

   b. Emissions of sulfur dioxide shall not exceed 8 per cent of the potential sulfur dioxide emission rate, as specified in 40 CFR Part 60.42b on a 30-day rolling average or 0.2 lb/MMBTU. (40 CFR 60.42b(k))

   c. Emissions of PM^2 shall not exceed 0.03 lb/MMBtu, averaged over the period of three (3) runs of at least 120 minutes in duration, excluding periods of startup, shutdown, and malfunction. (40 CFR 60.43b(h))

[1] Potential-to-emit estimates are based on operation at full capacity for 8760 hours per year while in compliance with all conditions of this permit.

d. Emissions of Carbon Monoxide (CO) shall not exceed 0.065 lb/MMBtu, averaged over the period specified in the test protocol approved by KDHE, excluding periods of startup, shutdown, and malfunction. If the CO and NOx emission limits cannot be achieved simultaneously, the NOx emission limit shall take precedence and a new CO emission limit shall be established by KDHE which may include the use of a continuous emission monitoring system (CEMS), based on a review of performance test results.

e. K.A.R. 28-19-31(b)(2): Opacity of visible emissions from the boiler stacks device shall not exceed 20 percent.

f. Annual emissions of NOx shall not exceed 100 tons per year, based on a twelve month rolling total, recalculated monthly.

g. Annual emissions of SO_2 shall not exceed 100 tons per year, based on a twelve month rolling total, recalculated monthly.

h. Annual emissions of CO shall not exceed 100 tons per year, based on a twelve month rolling total, recalculated monthly.

i. Annual emissions of HCl shall not exceed 10 tons per year, based on a twelve month rolling total, recalculated monthly.

j. Annual emissions of combined hazardous air pollutants (HAP's) shall not exceed 25 tons per year, based on a twelve month rolling total, recalculated monthly.

k. The amount of MSW burned in the boiler shall not exceed 30 per cent by weight, based on a twelve month rolling total, recalculated monthly.

3. Coal System:

K.A.R. 28-19-650 limits visible emissions from any new or modified coal handling equipment to 20 percent opacity.

4. Ash System:

K.A.R. 28-19-650 limits visible emissions from any new or modified ash system equipment to 20 percent opacity.

5. Lime System:

K.A.R. 28-19-650 limits visible emissions from any new or modified lime system equipment to 20 percent opacity.

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[2] The term "PM" as used in this permit means that particulate matter emitted by the GER boiler that can be quantified by analysis under Reference Method 5 set forth in Appendix A of 40 C.F.R. Part 60.

Permit Conditions

1. Coal handling equipment, either newly constructed or modified, if any, shall be enclosed and vented to a baghouse with a 99% manufacturers guarantee control efficiency.

2. Newly constructed or modified systems for use of fly ash, lime, ferric sulfate and soda ash systems, if any, shall be enclosed and vented to a baghouse with a 99% manufacturers guarantee control efficiency.

3. The baghouses for the newly constructed or modified equipment shall be in place and continuously operating to control emissions of PM and PM_{10} whenever the equipment is in operation. Maintenance and repair of the baghouses shall be conducted in a manner to minimize emissions. (K.A.R. 28-19-501(d)(1))

4. A written pollution control equipment maintenance plan will be developed, implemented and maintained for the referenced baghouses.

Compliance and Other Performance Testing

1. Within 60 days after achieving the maximum production rate at which the GER boiler will be operated, but not later than 180 days after initial start-up, the owner or operator shall have completed performance tests to demonstrate compliance with the applicable conditions and limitations set forth in this permit for HCl, CO and PM and furnish KDHE a written report of the results of such performance tests.

2. Within 60 days after achieving the maximum production rate at which the GER boiler will be operated, but not later than 180 days after initial start-up, the owner or operator shall conduct Method 9 performance test(s) to demonstrate compliance with the opacity limitations set forth for the new or modified coal, lime and ash handling equipment and furnish KDHE a written report of the results of such performance test(s).

3. Continuous monitoring systems (CEMS) and monitoring devices required shall be installed and operational prior to conducting compliance performance tests under 40 CFR 60.8. Verification of operational status, at a minimum, includes completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the devices as required by 40 CFR 60.13. Note that 30 days of CEMS data are required to complete the performance tests for SO_2 and NOx.

4. In conducting the compliance performance tests required by this permit, the reference test methods and procedures outlined in K.A.R. 28-19-212 and 40 CFR 60.48a shall be used to demonstrate compliance with the limitations and conditions set forth in this permit.

Monitoring Requirements

1. Within 60 days after achieving the maximum production rate at which the GER boiler will be operated, but not later than 180 days after initial start-up of the boiler, the owner or operator of the GER unit shall demonstrate compliance with the SO_2 and NOx limits. This requires that the owner or operator install and operate a continuous monitoring system (CEMS) to monitor and record emissions of SO_2, NOx, and opacity as required by 40 CFR 60.47b and 40 CFR 60.48b or alternatives to monitoring procedures or requirements approved by the Administrator of the U.S. EPA pursuant to 40 CFR 60.13(i). Thirty days of CEMS data are needed to demonstrate compliance with the SO_2 and NOx limits.

2. All continuous monitoring systems required by 40 CFR Part 60 shall meet the applicable requirements of 40 CFR 60.13, Appendix B, and Appendix F for certifying, maintaining, operating and assuring quality of the systems.

Recordkeeping

1. The owner or operator of the emission source shall maintain records of the occurrence and duration of any start-up, shut-down, or malfunction in the operation of the GER boiler; any malfunction of any air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. These requirements are described in 40 CFR 60.7(b) and 40 CFR 60.49(b), (f), (g), (k), and (m).

2. The owner or operator of the emission source shall maintain records of the occurrence and duration of any emergency condition in the operation of the GER scrubber. These requirements are described in 40 CFR 60.7(b).

3. The owner or operator of the emission source shall maintain records of the occurrence and duration of any periods during which a continuous monitoring system or monitoring device is inoperative. These requirements are described in 40 CFR Part 60.

4. The owner or operator of the emission source shall maintain records of the reports, notifications, and performance tests required by this permit.

5. The owner or operator of the emission source shall maintain records of the monthly heat input to the boiler.

6. The owner or operator of the emission source shall maintain records of the monthly SO_2, NOx, HCl and CO emissions as calculated using the heat input from item 5 of this section and the CEM data required by 40 CFR 60.47b and 60.48b. For CO and HCl, a pound per million BTU factor based on the most representative stack test data may be used in lieu of CEM data for CO and HCl.

7. The owner or operator shall record the weights each quarter of MSW and all other fuels. The monthly data for the 12 month rolling average calculation for all fuels shall also be maintained.

All of the above records shall be maintained on site for a period of 2 years from the date of record. The data must be available for up to 5 years from the date of record, but may be maintained off-site two years after the date of record.

Reporting Requirements

Reports demonstrating compliance shall be submitted to the KDHE in the same units as stated in the applicable requirements.

1. Items that are required to be reported semiannually (Opacity, NOx and SO_2 per 40 CFR 60.49b) shall be submitted to KDHE and postmarked by the 30th day following the end of each calendar half.

2. The GER unit's excess emissions and monitoring systems performance report and/or a summary report for opacity per 40 CFR 60.49b shall be submitted to the KDHE as required by 40 CFR 60.7(c). The summary report form shall contain the information and be in the format as specified in 40 CFR 60.7(d). Written reports of excess emissions shall include the following information:

    a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, the date and time of commencement and completion of each time period of excess emissions, and the process operating time during the reporting period.

    b. Specific identification of each period of excess emissions that occurs during start-ups, shut-downs, and malfunctions, the nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero span checks and the nature of the system repairs and adjustments.

    c. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

3. The owner or operator shall submit all operating or relevant information used to estimate actual air emissions for the source for the preceding year to KDHE. This information shall be submitted by April 1 of each year, beginning the year after startup of the facility, on forms provided or approved by the department. If forms and instructions have not been received prior to January 1 of each year the owner or operator should contact the department.

4. If at any time the facility's operations exceed the operational limitations established under 2 d, f, g or h of the Air Emissions Limitation Section of this permit, the owner or operator shall:

   a. notify KDHE in writing of any operational exceedence. This notification shall be mailed or delivered the first working day following discovery of the exceedence.

   b. submit to KDHE a compliance plan stating those actions being taken by the owner or operator to assure future compliance with the operational limitations. This plan shall be submitted within 60 days of discovering the exceedance. This plan will clearly state if an application for a Class II permit modification or if an application for a Class I and PSD permit will be submitted. Any such application will be filed within 180 days of discovering the exceedence.

5. K.A.R. 28-19-501(c)(1) requires reporting the actual operations if, at the end of any calendar quarter, the facility's actual operations exceed 85% of the operational limitations(i.e., if the facility emits more than 85 tons of SO2, NOx, or CO, or 8.5 tons of HCl for the past four calendar quarters). This report shall be submitted to KDHE within 45 days of the last day of the month following the conclusion of the calendar quarter. KDHE may waive this requirement after review of the initial performance test results.

6. Submitting any or all of these reports does not shield the owner or operator from enforcement action for exceeding the permit limitations or for other violations of the Kansas Air Quality Regulations.

Notification

1. The Bureau of Air and Radiation shall be notified when installation of the equipment is complete so an evaluation may be conducted to verify compliance with applicable regulations.

2. K.A.R. 28-19-720 (40 CFR 60.7(a)) requires that written notifications of the following be submitted to KDHE:

a. The date construction of the GER boiler, associated fuel and ash handling equipment, and the associated air pollution control systems is commenced. The notification is to be postmarked no less than 30 days after such date.

b. The actual date of initial startup of the GER boiler. The notification is to be postmarked within 15 days after such date.

c. The date when the initial performance testing is to commence. The notification is to be postmarked no less than 30 days prior to such date.

Please use the enclosed NSPS notification form to submit the above required notifications.

General Provisions

1. This document shall become void if construction, installation or modification of the GER facility has not commenced within 18 months of the amended effective date of this permit, or if the construction, installation or modification of GER facility is interrupted for a period of 18 months or longer.

2. A construction permit or approval must be issued by KDHE prior to commencing any construction or modification of equipment or processes which result in an increase in potential-to-emit equal to or greater than the thresholds specified at K.A.R. 28-19-300.

3. Upon presentation of credentials and other documents as may be required by law, the owner or operator shall allow a representative of the KDHE (including authorized contractors of the KDHE) to:

   a. enter upon the owner or operator's premises where a regulated facility or activity is located or conducted or where records must be kept under conditions of this document;

   b. have access to and copy, at reasonable times, any records that must be kept under conditions of this document;

   c. inspect at reasonable times, any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this document; and

   d. sample or monitor, at reasonable times, for the purposes of assuring compliance with this document or as otherwise authorized by the Secretary of the KDHE, any substances or parameters at any location.

4. The emission units or stationary sources that are the subject of this document shall be operated in compliance with all applicable requirements of the Kansas Air Quality Act and the Federal Clean Air Act.

5. This document does not relieve the owner or operator of the obligation to obtain other approvals, permits, licenses or documents of sanction that may be required by other federal, state or local government agencies.

6. Issuance of this document does not relieve the owner or operator of any requirement to obtain an air quality operating permit under any applicable provision of K.A.R. 28-19-500.

Permit Engineer

Dana S. Morris

Dana S. Morris, P.E.
Professional Environmental Engineer
Air Permitting Section

4/11/2008
Date Signed

DSM:saw
c: NWDO
C-7613 (C-6529, O-6624)